REMARKS/ARGUMENTS

The Examiner has objected to the drawings under 37 C.F.R. 1.83(a) as not showing every feature of the invention as specified in the claims. In particular, the Examiner states the following on page 2 of the Office Action: "Therefore, the displaying a graphical user interface over the region for selecting at least one parameter for distorting at least one of the region must be shown or the feature(s) canceled from the claim(s)." The Applicant believes that the Examiner is referring to the first step in independent Claim 23. In response, the Applicant respectfully submits that the claimed features are shown in the drawings. In particular, the "graphical user interface" and the "region" are shown in FIG. 4 of the application as items **400** and **412** (or **420** and **430** which are surrounded by **412**).

In addition, on page 2 of the Office Action the Examiner has objected to the title of invention as being non-descriptive. The Examiner suggests that the title be amended to recite: "Method for Generating a Detail-In-Context Presentation". The Applicant respectfully submits that the Examiner's suggested title is actually much less descriptive than the present title as it does not include reference to eye or position tracking.

Furthermore, on page 3 of the Office Action the Examiner has objected to the abstract as it does not include a clear and concise statement of the technical disclosure of the application. The abstract of the application includes a restatement of original Claim 1. As such, the Applicant respectfully submits that the present abstract is inherently a concise statement of the invention. The Applicant respectfully submits that it is common practice to draft the abstract in this way so that the content of the abstract cannot be latter used in litigation to attack the validity of the claims.

Claims 1-5, 8-16, and 19-40 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite. In particular, Claims 1-5, 8-16, 19-22, 32-33, and 37-40 stand rejected for not including a step for displaying the presentation on the display screen. In response, the step "displaying the presentation on the display screen" has been added to amended independent Claims 1, 12, 23, and 32. In addition, independent Claims 23 and 32 stand rejected because it is not clear to the Examiner whether the expression "graphical user interface" ("GUI") relates to a computer system screen or some other element. In response, the limitation "displaying a graphical user interface ('GUI')" in

original Claim 23 has been amended to recite "displaying a graphical user interface ('GUI') on the display screen" in amended Claim 23. Please note that the expression "graphical user interface" does not appear in original Claim 32. Finally, Claims 24 and 34 stand rejected for lacking proper antecedence with respect to the expression "adjusted presentation". In response, the word "adjusted" has been deleted from amended Claim 24 and Claim 34 has been cancelled.

Claims 1-5, 11-16, 22, 32-34, and 40 stand rejected under 35 U.S.C. 102(a) as being anticipated by United States Patent Application Publication No. 2004/0056899 by Sinclair II, et al. ("Sinclair"). In addition, Claims 1-6, 12-16, 23-25, and 32-35 stand rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 5,425,137 to Mohan, et al. ("Mohan"). In addition, Claims 6, 17, and 35 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Sinclair in view of United States Patent No. 6,249,290 to Herndon, et al. ("Herndon"). In addition, Claims 8, 19, and 37 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Sinclair in view of United States Patent No. 5,828,575 to Sakai ("Sakai"). In addition, Claims 9, 20, and 38 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Sinclair in view of United States Patent No. 5,481,622 to Gerhardt, et al. ("Gerhardt"). In addition, Claims 10, 21, and 39 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Sinclair in view of Gerhardt and United States Patent No. 4,891,630 to Friedman, et al. ("Friedman"). In addition, Claims 8, 19, 28, and 37 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Mohan in view of Sakai. In addition, Claims 9, 20, 29, and 38 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Mohan in view of Gerhardt. In addition, Claims 10, 21, 30, and 39 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Mohan in view of Gerhardt and Friedman. Finally, Claims 7, 18, 27, and 36 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Mohan in view of Microsoft Paint Version 5.1 by Microsoft Corp. ("Microsoft").

Claims 1-7, 10-18, 21-27, 30-32, 35-36, and 39-40 have been amended with a view to better defining the invention. Please note that the subject matter of original Claims 33-34 has been included in amended Claim 32. Claims 33-34 have been cancelled accordingly. No new matter has been entered by these amendments. Consequently, the Examiner is respectfully requested to consider the amended and original claims in view of the following comments.

Claim 1

For reference, amended Claim 1 recites the following:

1. (Currently Amended) A method for generating a detail-in-context presentation for an original image for display on a display screen of a system, comprising:

receiving a signal through a position tracking device coupled to the system to initiate generation of the presentation, wherein the signal indicates a location and a depth in the original image;

in response to the signal, distorting the original image to produce the presentation, the presentation having a distorted region to provide detailed information for a region-of-interest in the original image; wherein the distorted region is positioned at the location and at the depth in the original image indicated by the signal; and, wherein the distorted region includes a magnified region having a magnification for at least at portion of the region-of-interest to provide the detailed information, at least partially surrounded by an at least partially compressed region where the magnification decreases to that of the original image to provide context for the magnified region with respect to the original image; and,

displaying the presentation on the display screen.

On page 4 of the Office Action the Examiner cites Sinclair against Claim 1 stating (underlining added):

"In re claim 1, Sinclair II et al. discloses the method for generating a detail in context presentation for an original image displaying on a screen (191) of a computer system (110) by receiving a signal from a user through a position-tracking device (161) coupled to the computer system to initiate the generation of the presentation (Figure 6a), and distorting the original image to produce the presentation (Figure 7D, item 715). It is noted that the dictionary defines distort as 'To twist out of a proper or natural relation of parts; misshape. A magnifying glass is defined in distorting an image because it makes the area magnified out of proper relation of it parts'. Hence, the magnification engine of Sinclair II et al. can be is

used to distort the image. Further, Sinclair II et al. teaches the presentation having a distorted region to provide the user with detailed information for a region of the original image (Figure 7D, item 715), and the presentation is only a small region of the whole view as well as it provides detailed information of the area via increase visibility."

Please consider the following selections from Sinclair (underling added):

"**[0028]** The drives and their associated computer storage media, discussed above and illustrated in **FIG. 1**, provide storage of computer readable instructions, data structures, program modules and other data for the computer **110**. In **FIG. 1**, for example, hard disk drive **141** is illustrated as storing operating system **144**, application programs **145**, other program modules **146**, and program data **147**. Note that these components can either be the same as or different from operating system **134**, application programs **135**, other program modules **136**, and program data **137**. Operating system **144**, application programs **145**, other program modules **146**, and program data **147** are given different numbers herein to illustrate that, at a minimum, they are different copies. A user may enter commands and information into the computer **110** through input devices such as a keyboard **162**, pointing device **161** (commonly referred to as a mouse), and trackball or touch pad. Other input devices (not shown) may include a microphone, joystick, game pad, satellite dish, scanner, or the like. These and other input devices are often connected to the processing unit **120** through a user input interface **160** that is coupled to the system bus, but may be connected by other interface and bus structures, such as a parallel port, game port or a universal serial bus (USB). A dedicated monitor **191** or other type of display device is preferably also connected to the system bus **121** via an interface, such as a video interface **190**. In addition to the monitor, computer **110** may also include other peripheral output devices such as speakers **197** and printer **196**, which may be connected through an output peripheral interface **195**."

"**[0057] FIG. 7D** illustrates a magnifying glass mouse magnification configuration usable in an embodiment of the invention. In this configuration, the cursor acts to position a virtual magnifying glass, such that a magnified version **715** of the screen content adjacent the cursor will displayed above the unmagnified desktop **713**. The cursor position is preferably under

user control, such as via a mouse or other pointing device as discussed above. Also as discussed, magnified portions of the desktop may or may not be stored when not displayed, and may or may not be pre-generated prior to use."

"**[0058]** A configuration similar to the magnifying glass mouse configuration is the floating window magnification configuration. In this configuration, the magnified desktop portion is represented in a floating window that may be moved about the desktop, but that does not necessarily move in conjunction with cursor movements or obscure the corresponding unmagnified portion as in the previously discussed configuration. In an alternative configuration, the floating window is instead docked or dockable."

First, item **161** of Sinclair is a "pointing device" such as a mouse. It is not a position tracking device capable of selecting a point in 3D space (i.e., a location and a depth). As such, Sinclair does not teach or suggest that element of amended Claim 1 that recites: "receiving a signal through a position tracking device coupled to the system to initiate generation of the presentation, wherein the signal indicates a location and a depth in the original image".

Second, FIG. 7D of Sinclair shows an inset magnifier (i.e., "magnified version" **715** is displayed over an "unmagnified desktop" **713**). The magnified version **715** does not have a magnified region (or focal region) surrounded by a compressed region (or shoulder region). As such, Sinclair does not teach or suggest that element of amended Claim 1 that recites: "wherein the distorted region includes a magnified region having a magnification for at least at portion of the region-of-interest to provide the detailed information, at least partially surrounded by an at least partially compressed region where the magnification decreases to that of the original image to provide context for the magnified region with respect to the original image".

On page 8 of the Office Action the Examiner cites Mohan against Claim 1 stating (underlining added):

"In claim 1, the teaching of Mohan et al. discloses the method for generating a detail in context presentation for an original image displaying on a screen of a computer system (104) by receiving a signal from a user through a position-tracking device (105) coupled to the computer system to initiate the generation of the presentation (1202), and distorting the original image to produce the presentation (Figure 2B). Further, Mohan teaches that the presentation can be magnification means which would be known in the art to provide the user with detailed information for a region of the original image (column 4, lines 41-50), and the presentation (Figure 2B, 204) is only a small region of the whole view as well as it provides users to see small details well."

For reference, the selection from Mohan cited by the Examiner above, recites the following (context and underling added):

"Lens Object Attributes…It will be apparent to those skilled in the art that many different lens object attributes may be provided without departing from the invention as herein claimed. Such lens object attributes may include analogs to real-world lens attributes (such as color filter, magnification, and the like), as well as attributes having no real-world counterparts (such as pixel inversion). If desired, lens object attributes may even vary with time according to a user-defined function. Examples of lens object attributes in the preferred embodiment include:…Region of Operation: This attribute defines the area to which the lens object's operations are applied. The user defines the lens object's region of operation by conventional interactive drawing means, such as geometrical shape-drawing tools, path tools, or brush tools. Thus, the region may be defined in terms of a location and defined shape, or it may be defined by an arbitrary bitmap specified by applying a series of conventional paint operations. Alternatively, the user may specify that the region perimeter be defined by some search criteria, such as color matching. If so, the user may specify a topological constraint to grow contiguously from a defined path. Regions may have disjoint areas, as well as 'holes'…The user may change the region of operation of existing lens objects by conventional interactive drawing means. Thus, those regions that were defined by geometrical shapes may be scaled, distorted, or otherwise modified. Those regions defined by brush tools may be changed by applying brush tools to the region definition. If the user

moves the lens object (for example, by 'dragging' a representation of the lens object using a conventional pointing device), the region of operation the lens object moves accordingly. The specific methods by which the user may specify and modify the region of operation are described below, in connection with **FIGS. 12** and **13**." (Col. 4, line 41 to col. 5, line 10.)

Please consider the following additional selections from Mohan (underling added):

"In the example shown, a user specifies three transformations. Referring now to **FIG. 2B**, the results of two transformations are shown: region **204** has been skewed, and region **205** has been darkened by the addition of random pixels at a specified density. The resulting image **203** is shown in display field **201**...Referring now to **FIG. 2C**, there is shown resulting image **206** after a third transformation. Here, region **207** has been flipped vertically." (Col. 1, lines 30-38.)

"In accordance with the present invention, there is provided a system and method for processing images wherein operations to be performed on the source image are defined in terms of a plurality of virtual lens objects, or 'lenses'. Each lens object represents one or more operations that are defined by user-specified lens attributes. One such attribute specifies the region of operation of the lens. Other lens attributes specify the type and magnitude of operations to be performed on the underlying image within the defined region of the lens. These operations may simulate actual physical lens behavior (such as enlarging or distorting the image) or they may be more abstract (such as making a color image black-and-white)." (Col. 1, line 66 to col. 2, line 13.)

"In the embodiment illustrated herein, CPU **101** can be a mainframe computer or a powerful personal computer or workstation; RAM **102** and data storage **103** are conventional RAM, read-only memory (ROM) and disk storage devices for the CPU; user input device **105** is a conventional keyboard and/or mouse; image input device **109** is a video camera with associated apparatus for converting a video image into a bitmap; and output device **104** is a conventional means for either displaying or printing processed images, or sending the processed images to processed image storage (not shown) for later viewing. The preferred

embodiment operates on still images, but the techniques and concepts disclosed herein could be applied to moving images without departing from the spirit or essential characteristics of the present invention." (Col. 3, lines 34-49.)

"Referring now to **FIG. 3**, there is shown a conceptual representation of the operation of system **100** according to the present invention. Display field **201** contains source image **202** that is to be processed. Source image **202** may be provided to the system according to any desired format. In the preferred embodiment, images comprise spatially correlated pixel data, or 'bitmaps', according to techniques known in the art. In the particular example of **FIG. 3**, three virtual lens objects **301**, **302**, **303** are applied to source image **202** in succession. Lens objects are not physical lenses, but rather they are stored software objects in an object-oriented software environment. Each lens has a number of attributes. The user may change the attributes of any of the lenses at will, or he or she may add new lenses and delete old ones, as will be described below. Thus, system **100** provides improved flexibility in processing images, as the user may try out various combinations of lenses with ease…In the example of **FIG. 3**, lens object **301** darkens an oval portion of the image, lens object **302** inverts pixels in a rectangular portion of the image, and lens object **303** flips another rectangular portion of the image. Note that the region of operation of lens object **303** overlaps that of lens object **302**, so that a portion of the flipped image produced by lens object **303** has inverted pixels. The lenses are applied in the specific order: lens **301**, then lens **302**, then lens **303**. Due to the overlap, changing the order of application of lens objects **302** and **303** would result in a different transformed image **304**." (Col. 3, line 50 to col. 4, line 12.)

Third, item **105** of Mohan is a "user input device" such as a "conventional keyboard and/or mouse". It is not a position tracking device capable of selecting a point in 3D space (i.e., a location and a depth). As such, Mohan does not teach or suggest that element of amended Claim 1 that recites: "receiving a signal through a position tracking device coupled to the system to initiate generation of the presentation, wherein the signal indicates a location and a depth in the original image".

Fourth, FIG. 2B of Mohan shows the application of a skewing transformation and a darkening transformation to selected regions **204, 205** of a source image (**202** in FIG. 2A). FIG. 2B of Mohan does not show a magnified region (or focal region) surrounded by a compressed region (or shoulder region). As such, Mohan does not teach or suggest that element of amended Claim 1 that recites: "wherein the distorted region includes a magnified region having a magnification for at least at portion of the region-of-interest to provide the detailed information, at least partially surrounded by an at least partially compressed region where the magnification decreases to that of the original image to provide context for the magnified region with respect to the original image".

As such, the Applicant believes that amended Claim 1 is patentable over Sinclair and Mohan as these references do not teach or suggest the subject matter of amended Claim 1. In addition, the Applicant believes that Claims 2-11, being dependent on amended Claim 1 and adding patentable features thereto, are also patentable.

Claims 5, 16, and 25

For reference, amended Claim 5 recites the following:

> 5. (Currently Amended) The method of claim 3 wherein the signal includes a direction for the projecting onto the plane.

On page 5 of the Office Action the Examiner cites Sinclair against Claim 5 stating (underlining added):

> "In re claim 5, the teaching of Sinclair II et al. discloses the signal includes direction for the perspective projection for the lens surface ([0048]). Moreover, Sinclair II et al. provides a location via cursor movement that may alter the magnification focus."

For reference, the selection from Sinclair cited by the Examiner above, recites the following (underling added):

> "**[0048]** The platform interface **605** collects information from the host platform that is relevant to the magnification and display process. For example, cursor movement may alter the magnification focus or source. Also, selection and manipulation of windows and objects, such as to move or resize a window etc. may alter the magnification target. Manipulation of a scroll wheel or selection of a scroll icon may also change the magnification target. In addition, a change in the material to be magnified, such as by operation of the application generating the material, may cause an update to the display of the magnified material. In general, all such relevant platform information is collected via the platform interface **605** so that it may be used when necessary to alter the magnification source, target, scale, and so on."

It is apparent from this selection that Sinclair does not teach generating a presentation by projection onto a plane of an original image that has been displaced onto a distortion function. It also apparent that Sinclair does not teach a direction for the projection onto the plane. All that paragraph 0048 of Sinclair teaches is that a cursor may be used to select an area of an original image to be magnified. Sinclair is silent with respect to projection of a displaced original image onto a plane and a direction for such a projection. As such, Sinclair does not teach or suggest the subject matter of amended Claim 5.

On page 9 of the Office Action the Examiner cites Mohan against Claim 5 stating (underlining added):

> "In re claim 5, the teaching of Mohan et al. discloses the signal includes direction for the perspective projection for lens surface (from column 4, line 66 to column 5, line 10)."

For reference, the selection from Mohan cited by the Examiner above, recites the following (underling added):

> "The user may change the region of operation of existing lens objects by conventional interactive drawing means. Thus, those regions that were defined by geometrical shapes may

be scaled, distorted, or otherwise modified. Those regions defined by brush tools may be changed by applying brush tools to the region definition. If the user moves the lens object (for example, by "dragging" a representation of the lens object using a conventional pointing device), the region of operation the lens object moves accordingly. The specific methods by which the user may specify and modify the region of operation are described below, in connection with FIGS. 12 and 13." (Col. 4, line 66 to col. 5, line 10.)

It is apparent from this selection that Mohan does not teach generating a presentation by projection onto a plane of an original image that has been displaced onto a distortion function. It also apparent that Mohan does not teach a direction for the projection onto the plane. All that col. 4, line 66 to col. 5, line 10 of Mohan teaches is that a dragging operation may be used to relocate a lens. Mohan is silent with respect to projection of a displaced original image onto a plane and a direction for such a projection. As such, Mohan does not teach or suggest the subject matter of amended Claim 5.

As such, the Applicant believes that amended Claim 5 is patentable over Sinclair and Mohan as these references do not teach or suggest the subject matter of amended Claim 5. In addition, for the reasons given above with respect to amended Claim 5, the Applicant believes that amended Claims 16 and 25 are also patentable.

Claims 10, 21, 30, and 39

For reference, amended Claim 10 recites the following:

10. (Currently Amended) The method of claim 1 wherein the position tracking device is an eye tracking device and wherein the depth for the distorted region within the original image is proportional to a focal depth for a user measured by the eye tracking device.

On page 14 of the Office Action the Examiner cites Friedman (and Sinclair and Gerhardt) against Claim 10 stating (underlining added):

"However, Friedman et al. discloses an eye-tracking device's problem of maximizing the depth of view can be achieved by having a lens move in order to focus the image of objects at various depths along the optical axis. As such eye-tracking systems to maximize the field of view would require a movement of the lens depth (column 1 lines 40-55)..."

For reference, the selection from Friedman cited by the Examiner above, recites the following (context and underlining added):

"An eyetracker (eye gaze sensing system) or almost any other computer vision system is improved if the field of view and depth of view of the image are enlarged. In the case of an eyetracker, the larger the field of view, the easier it is to position the device such that the user's eye can be viewed. Maximizing the depth of the field of view is particularly important since it allows the user to be at various positions along the optical axis. One technique for improving the depth of the field is to use an automatic focusing lens, for example, a lens that will mechanically move in order to focus the image of objects at various depths along the optical axis. A mechanical focus is not often desirable. It adds to the expense of the system, adds to the physical size, decreases reliability due to mechanical wear and tear, increases the audible noise generated by the system and slows the eye gaze sensing process during the time when focusing is taking place because the image is blurred at that time. An alternative to an automatic mechanical focusing lens system is to use a fixed focus lens system; that is, a lens focusing an image of an object at only one depth. The depth of field inherent in the fixed focus system is a function of the f number of the lens. The higher the f number, the smaller the diameter of the lens. Also, the higher the f number, the less the capacity to gather light and the larger the depth of field. To maximize the depth of field, the f number must be maximized but this results in less light being gathered by the lens and focused on the image. Hence, to maximize the depth of field by increasing the f number, it is essential to increase the brightness of the image features to be analyzed." (Col. 1, line 40 to col. 2, line 2.)

It is apparent that the above selection from Friedman has nothing to do with the subject matter of amended Claim 10. What this selection from Friedman pertains to is the depth of field of a camera lens used in an eye-tracking system. Depth of field is the distance in front of and beyond an object

that appears to be in focus when viewed by a particular camera lens. This is not at all related to the subject matter of amended Claim 10 which pertains to the depth of a distorted region within an original image. The focal depth referred to in amended Claim 10 is not depth of field. Rather, it is the depth in the original image at which a user is focusing with his or her two eyes. Friedman is silent with respect to a user's focal depth. As such, Friedman, Sinclair, and Gerhardt do not teach or suggest the subject matter of amended Claim 10.

On pages 15-16 of the Office Action the Examiner cites Friedman (and Mohan and Gerhardt) against Claim 10 stating much the same as that quoted above from page 14 of the Office Action. For the reasons given above, the Applicant believes that Friedman, Mohan, and Gerhardt do not teach or suggest the subject matter of amended Claim 10 either.

As such, the Applicant believes that amended Claim 10 is patentable over Friedman, Sinclair, Mohan, and Gerhardt as these references do not teach or suggest the subject matter of amended Claim 10. In addition, for the reasons given above with respect to amended Claim 10, the Applicant believes that amended Claims 21, 30, and 39 are also patentable.

Claim 12

For reference, amended Claim 12 recites the following:

> 12. (Currently Amended) A method for adjusting a detail-in-context presentation of an original image displayed on a display screen of a system, comprising:
>
> receiving a signal through a position tracking device coupled to the system to adjust the presentation, wherein the signal indicates an adjusted location and an adjusted depth in the original image;
>
> in response to the signal, distorting the original image to produce an adjusted presentation, the adjusted presentation having a distorted region to provide detailed information for a region-of-interest in the original image; wherein the distorted region is positioned at the adjusted location and at the adjusted depth in the original image indicated by the signal; and, wherein the distorted region includes a magnified

region having a magnification for at least at portion of the region-of-interest to provide the detailed information, at least partially surrounded by an at least partially compressed region where the magnification decreases to that of the original image to provide context for the magnified region with respect to the original image; and,

displaying the adjusted presentation on the display screen.

On pages 5-6 of the Office Action the Examiner cites Sinclair against Claim 12 stating (underlining added):

"In re claim 12, the teaching of Sinclair II et al. discloses a method for adjusting a detail in context presentation for an image for display on a screen (191) of a computer system (110) by receiving a signal from a user through a position-tracking device (161) coupled to the computer system to adjust the presentation (Figure 6a, item 601 and 609), and distorting the original image to produce the presentation (Figure 7D, item 715). It is noted that the magnification engine of Sinclair II et al. can be is used to distort the image for the reasons set forth above. Further Sinclair II et al. teaches the presentation having a distorted region to provide the user with detailed information for a region of the original image (Figure 7D), and the presentation is only a small region of the whole view as well as it provides detailed information for that area via increase visibility."

Please consider the following additional selections from Sinclair (underling added):

"**[0046]** **FIG. 6A** is a schematic diagram of a magnification application **601** according to an embodiment of the invention. The magnification application **601** corresponds to the magnification applications **311** and/or **312** and is preferably usable in conjunction with the graphics engine **305**, **405**, **505**. In overview, the magnification application **601** utilizes an external magnification facility to provide high quality magnified content, and, in certain embodiments, to render the final image."

"**[0047]** In greater detail, the magnification application **601** comprises a user interface **603**, a platform interface **605**, a rendering interface **607**, and a graphics engine interface **609**. The

user interface **603** presents an interface, such as a visible interface rendered on a screen, to a user of the application **601**, so that the user may select magnification constraints such as scale and type of resulting display (see below for a number of potential display types). For example, one display type would be a split-screen bifocal display. The user interface **603** collects the user input regarding magnification constraints."

"**[0048]** The platform interface **605** collects information from the host platform that is relevant to the magnification and display process. For example, cursor movement may alter the magnification focus or source. Also, selection and manipulation of windows and objects, such as to move or resize a window etc. may alter the magnification target. Manipulation of a scroll wheel or selection of a scroll icon may also change the magnification target. In addition, a change in the material to be magnified, such as by operation of the application generating the material, may cause an update to the display of the magnified material. In general, all such relevant platform information is collected via the platform interface **605** so that it may be used when necessary to alter the magnification source, target, scale, and so on."

First, as mentioned above with respect to Claim 1, item **161** of Sinclair is a "pointing device" such as a mouse. It is not a position tracking device capable of selecting a point in 3D space (i.e., a location and a depth). As such, Sinclair does not teach or suggest that element of amended Claim 12 that recites: "receiving a signal through a position tracking device coupled to the system to adjust the presentation, wherein the signal indicates an adjusted location and an adjusted depth in the original image".

Second, also as mentioned above with respect to Claim 1, FIG. 7D of Sinclair shows an inset magnifier (i.e., "magnified version" **715** is displayed over an "unmagnified desktop" **713**). The magnified version **715** does not have a magnified region (or focal region) surrounded by a compressed region (or shoulder region). As such, Sinclair does not teach or suggest that element of amended Claim 12 that recites: "wherein the distorted region includes a magnified region having a magnification for at least at portion of the region-of-interest to provide the detailed information, at least partially surrounded by an at least partially compressed region where the magnification

decreases to that of the original image to provide context for the magnified region with respect to the original image".

On page 9 of the Office Action the Examiner cites Mohan against Claim 12 stating (underlining added):

> "In re claim 12, the teaching of Mohan et al. discloses the method for adjusting (column 3, lines 62-65) a detail in context presentation for an original image displaying on a screen of a computer system (104) by receiving a signal from a user through a position-tracking device (105) coupled to the computer system to initiate the generation of the presentation (1202), and distorting the original image to produce the presentation (Figure 2B). Further, Mohan teaches that the presentation can be magnification mean which would be known in the art to provide the user with detailed information for a region of the original image (column 4, lines 41-50), and the presentation (Figure 2B, 204) is only a small region of the whole view as well as it provides users to see small details well."

Third, as mentioned above, item **105** of Mohan is a "user input device" such as a "conventional keyboard and/or mouse". It is not a position tracking device capable of selecting a point in 3D space (i.e., a location and a depth). As such, Mohan does not teach or suggest that element of amended Claim 12 that recites: "receiving a signal through a position tracking device coupled to the system to adjust the presentation, wherein the signal indicates an adjusted location and an adjusted depth in the original image".

Fourth, also as mentioned above, FIG. 2B of Mohan shows the application of a skewing transformation and a darkening transformation to selected regions **204**, **205** of a source image (**202** in FIG. 2A). FIG. 2B of Mohan does not show a magnified region (or focal region) surrounded by a compressed region (or shoulder region). As such, Mohan does not teach or suggest that element of amended Claim 12 that recites: "wherein the distorted region includes a magnified region having a magnification for at least at portion of the region-of-interest to provide the detailed information, at least partially surrounded by an at least partially compressed region where the magnification

decreases to that of the original image to provide context for the magnified region with respect to the original image".

As such, the Applicant believes that amended Claim 12 is patentable Sinclair and Mohan as these references do not teach or suggest the subject matter of amended Claim 12. In addition, the Applicant believes that Claims 13-22, being dependent on amended Claim 12 and adding patentable features thereto, are also patentable.

Claim 23

For reference, amended Claim 23 recites the following:

> 23. (Currently Amended) A method for generating a detail-in-context presentation for a region-of-interest within an original image for display on a display screen of a system, comprising:
>
> displaying a graphical user interface ("GUI") on the display screen over the region-of-interest for selecting at least one parameter for distorting the original image;
>
> receiving a signal through an eye tracking device coupled to the system for adjusting the GUI to select the at least one parameter, wherein the at least one parameter includes a location and a depth in the original image;
>
> distorting the original image by applying a distortion function adjusted by the at least one parameter to the original image to produce the presentation, the presentation having a distorted region to provide detailed information for the region-of-interest; wherein the distorted region is positioned at the location and at the depth in the original image included in the signal; and, wherein the distorted region includes a magnified region having a magnification for at least at portion of the region-of-interest to provide the detailed information, at least partially surrounded by an at least partially compressed region where the magnification decreases to that of the original image to provide context for the magnified region with respect to the original image; and,

displaying the presentation on the display screen.

On page 10 of the Office Action the Examiner cites Mohan against Claim 23 stating (underlining added):

> "In re claim 23, the teaching of Mohan et al. discloses displaying a graphical user interface (801, Figure 8a) over the region for selecting (816, Figure 8a) at least one parameter for distorting at least one of the region, the focal region and the shoulder region (column 4, lines 41-50) receiving a signal from the user through a position tracking device (109) coupled to the computer system (100) for adjusting the GUI to select at least one parameter, and distorting the region in accordance with a distortion function and at least one parameter to produce the presentation for display on the screen. Column 12, lines 1-17 and shown in Figure 8B in Mohan teaches and example of modifying a lens via series of mouse inputs."

For reference, the selection from Mohan cited by the Examiner above, recites the following (context and underling added):

> "Referring now to **FIG. 8A**, there is shown a sample screen **801** during typical operation of the invention. Menu bar **802** is provided, including a series of buttons **803-813** for accessing various types of commands, as follows: button **803** provides access to conventional file commands such as opening, saving, deleting, or otherwise manipulating a file; button **804** provides access to conventional view-related commands, such as scrolling, zooming in or out, or changing views; button **805** provides access to conventional edit-related commands, such as cut, copy, and paste; button **806** provides access to snapshot commands, as described above; buttons **807** through **811** provide access to various object-related commands, including arranging **807**, transforming **808**, controlling effects **809**, specifying regions **810**, and general lens-related operations **811**; button **812** provides access to conventional library-related commands; and button **813** provides access to conventional help-related commands...When the user clicks on one of buttons **803-813**, a pull-down menu is presented, allowing the user to select a command. In the example shown in **FIG. 8A**, the user has clicked on lens button **811**, and pull-down menu **814** is presented. The user may select

among any of the commands listed in pull-down menu **814**. The selected command will operate on lens **815** that has been previously selected and is highlighted on screen **801**...Tool box **816** provides access to various draw-related tools that can be used to draw lenses and/or non-selectable objects. Tool box **816** includes tools for performing functions such as: selecting; moving; rotating; flipping; scaling; shearing; defining regions of various types; painting; erasing; brightening; darkening; sharpening; blurring; spreading color; magnifying; reducing; sampling color; stroking; brushing; specifying brush color; specifying brush opacity; and specifying brush frequency. Each such tool in tool box **816** is represented by a unique icon...Referring now to **FIG. 8B**, there is shown screen **801** after the user has selected a 'lens modify' command from pull-down menu **814**. Lens editor dialog box **817** is presented, allowing the user to make changes to lens **815** that has been previously selected. Lens editor dialog box **817** allows the user to specify or change the lens name **818**, the lens ordinal **819** (which determines the vertical positioning of the lens, as shown in FIG. 4), region edge blending (or soft edge depth) **820**, and opacity spread **821**. In addition, dialog box **817** contains list **822** of image processing operations performed by selected lens **815**. In the example shown, list **822** includes eight 'Paint' operations and one 'Brighten' operation **825**. The user may select any of these operations by clicking on it, and may modify or delete them using operation editing buttons **823**. The user may also add new operations at selected positions in list **822** using operation insertion buttons **824**." (Col. 11, line 30 to col. 12, line 18.)

First, as mentioned above, item **105** of Mohan is a "user input device" such as a "conventional keyboard and/or mouse". It is not an eye tracking device capable of selecting a point in 3D space (i.e., a location and a depth). Note that the Examiner may have mistakenly referred to item **109** in the above which is an "image input device" such as a "video camera with associated apparatus for converting a video image into a bitmap". As such, Mohan does not teach or suggest that element of amended Claim 23 that recites: "receiving a signal through an eye tracking device coupled to the system for adjusting the GUI to select the at least one parameter, wherein the at least one parameter includes a location and a depth in the original image".

Second, the selections from Mohan cited by the Examiner do not teach a magnified region (or focal region) surrounded by a compressed region (or shoulder region). As such, Mohan does not teach or suggest that element of amended Claim 23 that recites: "wherein the distorted region includes a magnified region having a magnification for at least at portion of the region-of-interest to provide the detailed information, at least partially surrounded by an at least partially compressed region where the magnification decreases to that of the original image to provide context for the magnified region with respect to the original image".

As such, the Applicant believes that amended Claim 23 is patentable over Sinclair and Mohan as these references do not teach or suggest the subject matter of amended Claim 23. In addition, the Applicant believes that Claims 24-31, being dependent on amended Claim 23 and adding patentable features thereto, are also patentable.

Claim 32

For reference, amended Claim 32 recites the following:

> 32. (Currently Amended) A method for generating a detail-in-context presentation for an original image for display on a display screen of a system, comprising:
>
> receiving a signal through a position tracking device coupled to the system to initiate generation of the presentation;
>
> in response to the signal, distorting the original image to produce the presentation, the presentation having a distorted region to provide detailed information for a region-of-interest in the original image; wherein the distorted region includes a magnified region having a magnification for at least at portion of the region-of-interest to provide the detailed information, at least partially surrounded by an at least partially compressed region where the magnification decreases to that of the original image to provide context for the magnified region with respect to the original image; wherein the distorting further includes applying a distortion function to the original image to produce the presentation by displacing at least portions of

the original image onto the distortion function and projecting the displaced at least portions of the original image onto a plane; wherein the distortion function includes a focal region corresponding to the magnified region and having an elevation to provide the magnification upon the projecting onto the plane and a shoulder region corresponding to the compressed region where the elevation decreases to provide the decreasing magnification upon the projecting onto the plane; and, wherein the signal includes a location for the distorted region within the original image and a direction for the projecting onto the plane; and,

displaying the presentation on the display screen.

On pages 6-7 of the Office Action the Examiner cites Sinclair against Claim 32 stating (underlining added):

"In claim 32, Sinclair II et al. discloses the method for generating a detail in context presentation for an original image displaying on a screen (191) of a computer system (110) by receiving a signal from a user through a position-tracking device (161) coupled to the computer system to initiate the generation of the presentation (Figure 6a), and distorting the original image to produce the presentation (Figure 7D, item 715). It is noted that the dictionary defines distort as 'To twist out of a proper or natural relation of parts; misshape. A magnifying glass is defined in distorting an image because it makes the area magnified out of proper relation of its parts'. Hence, the magnification engine of Sinclair II et al. can be is used to distort the image. Further, Sinclair II et al. teaches the presentation having a distorted region to provide the user with detailed information for a region of the original image (Figure 7D), and the presentation is only a small region of the whole view as well as it provides detailed information of that area via increase visibility. Moreover, Sinclair II et al. discloses the signal includes a location for the lens surface ([0048]). Further, Sinclair II et al. provides a location via cursor movement that may alter the magnification source."

First, as mentioned above, item **161** of Sinclair is a "pointing device" such as a mouse. It is not a position tracking device capable of selecting a point in 3D space (i.e., a location and a direction). As such, Sinclair does not teach or suggest that element of amended Claim 32 that recites: "receiving a signal through a position tracking device coupled to the system to initiate generation of the presentation…wherein the signal includes a location for the distorted region within the original image and a direction for the projecting onto the plane".

Second, also as mentioned above, FIG. 7D of Sinclair shows an inset magnifier (i.e., "magnified version" **715** is displayed over an "unmagnified desktop" **713**). The magnified version **715** does not have a magnified region (or focal region) surrounded by a compressed region (or shoulder region). As such, Sinclair does not teach or suggest that element of amended Claim 32 that recites: "wherein the distorted region includes a magnified region having a magnification for at least at portion of the region-of-interest to provide the detailed information, at least partially surrounded by an at least partially compressed region where the magnification decreases to that of the original image to provide context for the magnified region with respect to the original image".

Third, the selections from Sinclair cited by the Examiner do not teach or suggest those elements of amended Claim 32 that recite: "wherein the distorting further includes applying a distortion function to the original image to produce the presentation by displacing the original image onto the distortion function and projecting the displaced original image onto a plane"; "wherein the distortion function includes a focal region corresponding to the magnified region and having an elevation to provide the magnification upon the projecting onto the plane and a shoulder region corresponding to the compressed region where the elevation decreases to provide the decreasing magnification upon the projecting onto the plane"; and, "wherein the signal includes a location for the distorted region within the original image and a direction for the projecting onto the plane". As such, the Examiner has not established a prima facie case of anticipation against amended Claim 32.

On page 11 of the Office Action the Examiner cites Mohan against Claim 32 stating (underlining added):

"In re claim 32, the teaching of Mohan et al. discloses the method for generating a detail in context presentation for an original image displaying on a screen of a computer system (104) by receiving a signal from a user through a position-tracking device (105) coupled to the computer system to initiate the generation of the presentation (1202), and distorting the original image to produce the presentation (Figure 2B). Further, Mohan teaches that the presentation can be magnification means which would be known in the art to provide the user with detailed information for a region of the original image (column 4, lines 41-50), and the presentation (Figure 2B, 204) is only a small region of the whole view as well as it provides users to see small details well. Moreover, Mohan et al. discloses the signal includes a location for the lens surface (column 4, lines 52-65). Further, Mohan et al. discloses the signal includes direction for the perspective projection for the lens surface (from column 4, lines 66 to column 5, line 10)."

Fourth, item **105** of Mohan is a "user input device" such as a "conventional keyboard and/or mouse". It is not a position tracking device capable of selecting a point in 3D space (i.e., a location and a direction). As such, Mohan does not teach or suggest that element of amended Claim 32 that recites: "receiving a signal through a position tracking device coupled to the system to initiate generation of the presentation...wherein the signal includes a location for the distorted region within the original image and a direction for the projecting onto the plane".

Fifth, FIG. 2B of Mohan shows the application of a skewing transformation and a darkening transformation to selected regions **204**, **205** of a source image (**202** in FIG. 2A). FIG. 2B of Mohan does not show a magnified region (or focal region) surrounded by a compressed region (or shoulder region). As such, Mohan does not teach or suggest that element of amended Claim 32 that recites: "wherein the distorted region includes a magnified region having a magnification for at least at portion of the region-of-interest to provide the detailed information, at least partially surrounded by an at least partially compressed region where the magnification decreases to that of the original image to provide context for the magnified region with respect to the original image".

Sixth, the selections from Mohan cited by the Examiner do not teach those elements of amended Claim 32 that recite: "wherein the distorting further includes applying a distortion function to the original image to produce the presentation by displacing the original image onto the distortion function and projecting the displaced original image onto a plane"; "wherein the distortion function includes a focal region corresponding to the magnified region and having an elevation to provide the magnification upon the projecting onto the plane and a shoulder region corresponding to the compressed region where the elevation decreases to provide the decreasing magnification upon the projecting onto the plane"; and, "wherein the signal includes a location for the distorted region within the original image and a direction for the projecting onto the plane". As such, the Examiner has not established a prima facie case of anticipation against amended Claim 32.

As such, the Applicant believes that amended Claim 32 is patentable over Sinclair and Mohan as these references do not teach or suggest the subject matter of amended Claim 32. In addition, the Applicant believes that Claims 33-40, being dependent on amended Claim 32 and adding patentable features thereto, are also patentable.

Please note that Claims 33-34 have been cancelled without prejudice. The Applicant reserves the right to pursue these cancelled claims in a continuing application or otherwise.

No new matter has been entered by the above noted amendments.

The Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

McCarthy Tétrault LLP

Date: November 24, 2007

By

Joseph P. Conneely
Registration No. 54,883
Telephone: (416) 601-8179
Fax: (416) 868-0673

McCarthy Tétrault LLP
Box 48, Suite 4700
66 Wellington Street West
Toronto Dominion Bank Tower
Toronto, Ontario, Canada
M5K 1E6